

CME 101 Introduction to Chemical and Molecular Engineering (Required)

Course Instructor: *Dr. Miriam Rafailovich*

Website: none

Course Goals:

To introduce students to modern-day chemical engineering profession, its ethical implications and societal impact. This is the first required course for the CME major freshmen and new transfers. [3 credits]

Pre- or Corequisite(s): None

Text(s): None

Class/ Laboratory Schedule:

Fall: Lecture, Tuesday/ Thursday, 3:50-5:10 pm

Topics Covered:

Week 1: Introduction to College of Engineering and Applied Sciences

Week 2: Engineering Undergraduates: Responsibilities and expectations

Week 3: Chemical Engineering as a discipline

Week 4: Chemical Engineering at the molecular level

Week 5: Chemical and Molecular Engineering (CME): Biotechnology industry perspective

Week 6: CME: Pharmaceutical industry perspective

Week 7: Term paper: Topics discussion and assignment

Week 8: CME: Chemical industry perspective

Week 9: CME: Petroleum industry perspective

Week 10: Chemical Engineer and the environment

Week 11: Working in interdisciplinary teams

Week 12: Balancing profits and societal issues

Week 13: Term paper discussion

Contribution of course to meet professional component:

Relationship of course to program outcomes:

CTPC "3a-k" Outcomes	% contribution
A. Ability to apply knowledge of math, engineering, and science	10%
B. Ability to design and conduct experiments, analyze data	
C. Ability to design system, component or process to meet needs	
D. Ability to function on multi-disciplinary teams	10%
E. Ability to identify, formulate, and solve engineering problems	
F. Understanding of professional and ethical responsibility	15%
G. Ability to communicate effectively	20%
H. Broad education	15%
I. Recognition of need an ability to engage in life-long learning	15%
J. Knowledge of contemporary issues	15%
K. Ability to use techniques, skills, and tools in engineering practice	
Any other outcomes and assessments?	
	100%

Prepared by _____

Date Prepared: _____